



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,657	04/16/2004	Akira Hatakeyama	Q80777	5697
23373	7590	05/17/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			WU, SHEAN CHIU	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/825,657

Applicant(s)

HATAKEYAMA ET AL.

Examiner

Shean C. Wu

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-17 and 19 is/are rejected.
- 7) ☒ Claim(s) 9, 18 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/16/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. Claims 1-9 and 12-20 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the average particle diameter of the fine metal particles is 1 to 3000 nm, does not reasonably provide enablement for the particles outside the disclosed range. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. See page 7, lines 4-11 in the specification.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 6-8, 10-12 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Sega et al. (US 6,001,533).

The reference discloses a composition for forming a non-conductive light-shielding layer, which comprises an alkali-soluble binder, a pigment, a photopolymerizable monomer, a photo-polymerization initiator and a solvent. The reference light-shielding layer is subjected to pattern-wise exposure. The pigment comprises fine particles of a double oxide selected from  $\text{CuMn}_2\text{O}_4$  and Mn is substituted with Fe, Co and/or Ni. The particle diameter of these pigments is in the range of 0.01 to 0.5  $\mu\text{m}$ . The reference light-shielding layer having excellent light-shielding properties is useful for making the light-shielding layer (black matrix) of a color filter to be used for liquid crystal displays. The reference further discloses a color filter, which can be obtained by a known method, comprising a transparent substrate, red, green and blue picture elements. In the reference, a terpolymer of (meth) acrylic acid, styrene and benzyl (meth) acrylate can also be preferably used as the alkali-soluble binder. The black pigment for use in the composition for forming a non-conductive light-shielding layer of the present invention is black-colored fine particles of a metallic oxide.

The non-conductive light-shielding layer can be formed on a substrate by coating the composition for forming a non-conductive light-shielding layer onto the substrate and then dried. The methods for coating the composition include a spinner, roll coater, curtain coater and extruder. A light-shielding layer has a thickness of approximately 1  $\mu\text{m}$ .

The reference composition can be prepared by dispersing and blending the aforementioned alkali-soluble binder, solvent, pigment, and, if necessary, dispersing agent. Alternatively, the composition can be obtained by mixing a dispersion of the pigment prepared by dispersing the pigment and dispersing agent in the solvent, with a

photosensitive resin solution prepared by dissolving the alkali-soluble binder, photopolymerizable monomer and photopolymerization initiator in the solvent. With respect to the dispersants and surface-active agents (surfactants), see col. 9, lines 36-48. Also, see the reference Examples.

Therefore, the reference anticipates the present invention.

5. Claims 4-5, 13, 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sega et al. (US 6,001,533).

With respect to claims 4-5 and 16-17, the reference differs from the claims in that the claims have the concentration range of surfactant used relative to the fine metal particles (0.01 to 30% by weight). However, it would have been obvious to those skilled in the art to utilize the reference teaching by adjusting the concentration of the disclosed surfactant to arrive at the claimed invention because the surfactant can be optionally added to the light-shielding layer composition.

With respect to claims 13 and 19, the protecting layer used and disposed on color filter comprising light-shielding layer is known in the art (see US 5,933,208), therefore, it would have been obvious to dispose the protective layer on light-shielding layer.

#### ***Allowable Subject Matter***

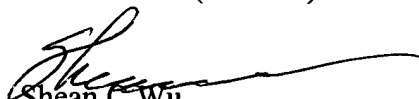
6. Claims 9, 18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 1756

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shean C. Wu whose telephone number is 571-272-1393. The examiner can normally be reached on 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Shean C Wu  
Primary Examiner  
Art Unit 1756

SCW